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Cottonopolis (pseud.)
The Manchester Ship Canal.
3d ed., enl. and rev.

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3rd EDITION, *Enlarged and Revised.—50th Thousand.*

THE

MANCHESTER SHIP CANAL.

WHY IT IS WANTED!

AND

WHY IT WILL PAY!

WITH OBSERVATIONS IN REPLY TO RECENT OBJECTIONS,

AND INCLUDING APPENDIX RELATING TO THE BRIDGEWATER NAVIGATION COMPANY.

BY "COTTONOPOLIS."

PRICE ONE PENNY.

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CHAP. I.

IS THE SHIP CANAL WANTED?

IT IS: Because the present railway rates for conveying goods to and from Liverpool are so high, and the Mersey Dock and Harbour Board's charges so oppressive, that the trade of Lancashire is being seriously crippled.

The cotton trade is heavily handicapped, and industries like sugar refining, glass manufacturing, &c., are being driven from South-East Lancashire to places where they are more accessible to water carriage, and consequent cheap freights.

Liverpool has lost many branches of trade, such as the imports of tea, logwood, &c., and a great part of the China and East India Export Trade. Considerably more than one-third of the entire exports of textile fabrics, machinery, &c., which formerly were shipped from Manchester, or passed through Manchester from Yorkshire, have been diverted to other ports, mainly through the excessive railway and dock charges to and at Liverpool.

The cost of transport and shipment at Liverpool of certain goods, such as cheap materials for paper-making, amounts to as much as 40 (forty) per cent. of the value of the materials themselves; whilst it has been publicly stated by Manchester merchants that it is cheaper to ship cotton goods to Calcutta through Aberdeen, than it is through Liverpool.

An Oldham machinist says it costs 2s. per ton more to convey mill machinery from Oldham to Liverpool and place it on board than it does to convey it from Liverpool to Bombay. Mr. Peacock, an eminent engine builder, says it is cheaper to ship locomotives from Gorton, near Manchester, by way of Glasgow, than it is by way of Liverpool.

A fact having an important bearing upon the great question of how to supply food to the toiling millions of Lancashire, Yorkshire, and surrounding country, is cited by some large produce importers, who say it costs more to convey Indian corn from Liverpool to the adjoining large inland towns than a sea freight across the Atlantic, and a long railway journey before it reaches the ship in America.

Another produce importer estimates that a quartern loaf of bread is taxed ¼d. more in Manchester than in Liverpool, by reason of the heavy railway and dock charges.

The Bridgewater Navigation Co., whose Canal ought to afford a cheap and competitive means of transport, is under agreement to charge the same rates as the railway companies. It will be seen by Appendix 2 to this pamphlet, how this change came about. The result is that all competition has now ceased, and the rates on the canal are maintained at the same high level as those of the railway companies.

In days past, when competition prevailed, the charges for the conveyance of some classes of goods on the canal were about one-third the amount charged now. Timber, for example, being carried for 2s. 6d. a ton (1s. 8d. per ton being asked for return freights), as against 7s. 11d. from Liverpool now, exclusive of cartage, dock dues, &c.

Mr. Palmer, C.E., writing in 1843 on the improvement of the Mersey and Irwell as a ship canal, observes that the

> "Liverpool and Manchester Railway was constructed ostensibly "as a required ADDITION to the means of conveyance [by the "Navigation] and to REDUCE ITS COST, &c."

How far this has happened we must leave the public to judge, after hearing what Liverpool says. The shippers and traders of that city feel the effect of the present high charges as keenly as the rest of Lancashire, and a large committee of its mercantile gentlemen are now about to apply to Parliament for powers to make a "plateway" to Manchester and adjacent towns (to be worked partly by horses), at an

estimated cost of four millions sterling, and a fund of £75,000 is being collected to defray the preliminary expenses.

In the preliminary prospectus of this "plateway" company it is stated that the object is to—

> "cheapen and improve the conveyance of goods and minerals—
> "that the traffic on the existing railways and canals already
> "occasionally taxes seriously their powers, and is yearly
> "increasing; moreover the rates they have combined to charge
> "are so heavy as to have been the subject of long-standing and
> "general dissatisfaction, and hitherto unavailing remonstrance.
>
> "These reasons, added to the necessity that our national
> "industries be not handicapped in their competition with
> "foreigners, seem to constitute at once a cause and justification
> "for a new and cheaper system of inland conveyance."

The *Liverpool Daily Post*, of the 10th October, 1882, says—

> "It is quite true that both Liverpool and Manchester have to
> "complain of insufficient means of communication. The railways
> "are choked—goods interfering with passengers, and passengers
> "with goods. If all tales be true some of the companies think
> "that, from its geographical position, they have Liverpool in a
> "corner, and can afford to give preferential rates to petted ports
> "of their own."

But it adds that—

> "a Canal of the ordinary type, or Mr. Alfred Holt's Goods
> "Railway, or possibly another line of Railway for goods and
> "passengers, similar to those now in existence"

would suffice.

Mr. W. B. Forwood, then Mayor of Liverpool, and lately President of the Liverpool Incorporated Chamber of Commerce, said in his evidence before a Select Committee in Parliament, in March 1881, (Q. 1651)—

> "That the average rate for carrying goods to Liverpool is 3.91d.
> "per mile, whilst the average rate to other places is 1.97d. per
> "mile, which in round figures is nearly 2d. per mile more for the
> "carriage of those goods to Liverpool than the Railway Com-
> "panies are willing to carry them to other ports for.

Again (Q. 1652)—

> "Our rate is rather more than double what it is from Man-
> "chester to Hull; it is quadruple that from Manchester to
> "Southampton, and very nearly treble that from Manchester
> "to London."

Again (Q. 1654)—

"There is no cheaper traffic in the country than the traffic "between Manchester and Liverpool; it is a constant flow both "ways."

And that (Q. 1656) he is—

"Confident, if the profits of that portion of the London and North "Western Line could be shown separately, they would very "largely exceed 10 per cent."

He adds further (Q. 1645)—

"That the trade of Liverpool is entirely that of an *entrepôt;* we "are not a manufacturing town, and we have no mineral "resources; we entirely depend for our trade upon our "geographical position or proximity to the manufacturing "centres of Yorkshire, Lancashire, and Staffordshire, &c."

Mr. John Williamson (Chairman of the Executive Committee appointed by the Joint Committee of the Liverpool City Council, Dock Board, and the various Mercantile Associations of Liverpool, for the purpose of giving evidence before the Select Committee on Railways, 1881-82), powerfully corroborated the evidence of Mr. Forwood. He added (Q. 2365) that he could recollect the time when—

"goods were being brought from Liverpool to Manchester by "canal at 4s. 6d. to 5s. 6d. a ton."

While the people of Liverpool are complaining of the excessive railway and canal charges, the Railway Companies throw back part of the blame upon the town itself. Mr. Findlay, General Manager of the London and North Western Railway Company, says in his evidence, July 1881, before the same Committee (Q. 14335):—

"With regard to the arrangements which exist at Liverpool for "railway traffic, I think that all has not been done at Liverpool "for the economical and proper accommodation of the traffic. "I think a great deal more might have been done in the way of "laying down railway communication in the docks, which, upon "the Liverpool side, it is almost devoid of, whilst upon the "Birkenhead side the system has been so inconveniently laid "down that it is impossible to get any heavy weight from a "railway truck alongside the ship, unless by laying it upon "planks and rolling it, and hauling it through warehouses; "further, there are no cranes or appliances, except what the "ships possess. If Liverpool had done what has been done at "the Albert and Victoria Docks in London, I have no doubt "that the cost of labour with which business could be carried "on in connection with the port of Liverpool would be very "materially reduced, whilst the facilities would be enormously

"increased. Thus, whilst Mr. Forwood comes here for the Dock "Board or the Town, to complain that the Railways have not "done their business, I take the liberty of saying that a great "deal more might have been done, and ought to have been done, "by the Dock Board, in the way of increasing the facilities of "shipping and transfer between the railways and docks, both in "Birkenhead and Liverpool.

And he then proceeds to prove these allegations by handing in statements showing the cost of importing various classes of goods at different ports and delivering them to railway stations, of which one example, viz., *Cotton Wool* (or Raw Cotton), may be quoted:—

	s.	d.	
Grimsby	2	2	per ton.
Garston (Old Dock)	2	3	,,
Fleetwood	2	7	,,
Barrow	2	9	,,
Hull	3	8	,,
London (East and West India Docks)	6	1	,,
Liverpool	8	1¼	,,

The Liverpool charges on timber are 8s. 10d. and 8s. 2½d. per ton, and 5s. 7½d. on grain, and 6s. 4¾d. on flour, as against proportionately lower charges at the other ports in the same way as the charges existing on raw cotton.

And to show that there is no immediate prospect of these Liverpool charges being reduced, Mr. Alfred Holt, of Liverpool, recently stated (in Oct. 1882) in Manchester that the rails on the quay to the berth for the Inman steamers were being removed, the railway companies preferring to cart traffic by horse and lurry right across the town to the railway depôts.

Mr. Forwood showed that the charge for carriage by railway of raw cotton from Liverpool to Manchester (31 miles) was 9s. per ton, which, added to the above 8s. 1¼d. and 1s. 6d. for cartage in Manchester, makes 18s. 7¼d. per ton from the ship to the mill.

[Note.—Cotton goods manufactured for shipment are charged 10s. per ton by railway from Manchester to Liverpool, 11s. 8d. per ton being charged for cotton goods for home use, to which 1s. 6d. must be added in each case for cartage at Liverpool.]

A correspondent, from Oldham, writing in the *Manchester Guardian* of 17th October 1882 (*vide* Appendix 1) shows that these Liverpool charges on the cargo amount to 10s. per ton (not 8s. 7¼d.) before they are placed on the railway truck.

There are other charges, the whole of which, including the 10s., may be summarised as follows:—

	Per ton of raw cotton. s.	d.
Liverpool dock charges and cartage... ...	10	0
Do. buying and selling, brokerage 1 per cent., say	12	0
Do. loss by sampling, say	6	0
Total Liverpool charges	28	0
Railway carriage from Liverpool to Oldham ... ... (s. 11, d. 0)		
Cartage, Oldham... ... ... (s. 1, d. 3)		
	12	3
Total from Liverpool to Oldham on cargo alone, per ton	40	3

The dock dues on ships themselves, as charged by the Mersey Dock and Harbour Board, have to be added to the above charges on cargo as follow, viz.:—

	Per ton. s.	d.		
Dock tonnage rates on vessels from S.E. Coast of America...	1	5		
Harbour rates do. ...	0	1½		
Wharf rates do. ...	0	4¼		
			1	10¾
Anchorage dues (legally chargeable but not at present collected)			1	3
Total legal dock dues on ships per ton ...			3	1¾

Mr. Cross, M.P., asked (Q. 14366) Mr. Findlay whether the rates were not advanced 10 per cent. from Liverpool to Preston in 1872, but he—

"Declined to pledge himself on that point."

Next day he admitted (Q. 14405) that—

"The Hon. Member's memory appears to have been "better than mine; the rates were advanced from Liverpool to "all the manufacturing districts in 1872, and with the exception "of Wigan, they remain now at the same rate as was then put "on—that is at about 1s. a ton advance."

Mr. Forwood submitted certain tables dealing with the carriage and rates for 2,765,000 tons of merchandise. Even the above small increase of 1s. per ton on this quantity means an additional sum of over £138,250 annually taken out of the pockets of the consumers and exporters. Mr. Forwood maintains (Q. 1852) that "Liverpool rates should be reduced by £400,000—that, in fact, they are paying £400,000 annually more than they ought to do."

Mr. Findlay, in the course of his evidence, let in a little light upon the arrangements of the London and Liverpool shipowners which had contributed to this result, and it is a little interesting to have the following facts vouched for by the testimony of so high an authority :—

(Q. 14309)

"Now there is a particular point which I should like to mention "to the Committee. Mr. Forwood made it a very great cause of "complaint that the export rate for Manchester goods to Liver- "pool was high as compared with the rate by way of London, "that is to say, it is 10s. to Liverpool, and 25s. to London. "Now, as a matter of fact, nearly the whole of the shipping "trade from Manchester to the East, China, and Japan, is "practically controlled, as regards the through rate from Man- "chester to India, by (I do not use the word offensively) a "combination of shipowners who fix the rate the same whether "the traffic goes from Manchester to China through London, or "whether it goes from Manchester to China through Liverpool; "there are a certain number of steamship owners, and a certain "number of steamships engaged in the trade, and they have "agreed the proportion which shall be carried by the steamship "owners in connection with London, and the proportion which "shall be carried by the steamship owners in connection with "Liverpool, they fix the price, and they make a pool of the "receipts, and say so much shall be attributable to the traffic "which goes by London, and so much by Liverpool. Indeed, I "have it upon authority, that Liverpool is paying upon the "balance many thousands a month to the London shipowners."

The excessive Railway and Dock Rates between Manchester and Liverpool not only occasion grave

concern to those two towns, but other Lancashire towns feel reason to complain. Of course any change which brings about an improved state of things to the two leading towns must, of necessity, bring indirect benefit to Oldham, Bolton, Bury, Ashton, Rochdale, Accrington, Stockport, and other surrounding places. It is considered by many persons that, in the event of the Canal being made, the new Corporation or Trust, or whatever it may be, will have power to appeal to the Railway Commission to compel the Companies to carry goods to towns nearer to Manchester than to Liverpool at cheaper rates than they are at present charging direct to those towns from Liverpool. The principle of charging equal *aggregate* rates, regardless of distance, has for the first time been overthrown by the Railway Commissioners, and their decision has recently been sustained on appeal in the case of the "Denaby Main Colliery Company *v.* The Manchester, Sheffield, and Lincolnshire Railway Company." The Railway Company had previously been charging the same uniform *aggregate* rate for carrying coal a distance of 44 miles that they had been charging to collieries distant 60 or 70 miles from the port of shipment. This has now been reversed, and a strictly mileage rate, proportionate to distance, has been imposed.

Therefore, in short, if Bolton, Oldham, Stockport, and other towns be brought by means of the new Canal within shorter reach of a port of shipment, they will be entitled, on this principle, to a considerable abatement in the charges now made for railway carriage from Liverpool, in proportion as the mileage by railway is lessened, through goods being brought first to Manchester by the Ship Canal, and then taken forward by railway.

This fact alone, on selfish grounds, should induce cotton spinners, bleachers, machinists, and others in the surrounding towns to support the Canal project. That they cannot hope for much relief from the railways will be apparent by the following evidence of Lancashire and Yorkshire manufacturers and mercantile authorities.

Mr. Henry Harrison, the then Mayor of Blackburn and a Cotton Spinner and Manufacturer, said, in his evidence before Parliament in April, 1881, in reply to the following question—

(Q. 2540)

"Has the question of the Railway tariffs on cotton and cotton "goods only been recently considered by you, or is it an old "standing grievance?" "It is an old standing grievance which "has been complained of for a long time."

(Q. 2541)

"I believe that Resolutions have been passed by the Town "Councils of various neighbouring towns with regard to it?" "Yes, in 1878 the Cotton Manufacturers' Association in "Blackburn mooted this question, and it was taken up by the "Corporations of Blackburn, Preston, Clitheroe, Accrington, "Darwen, and Burnley, and we asked the Railway Companies "to receive a deputation upon the subject."

(Q. 2542)

"Each of these Corporations thinking they had a grievance in the rates which were charged by the Railway Companies?" "Yes."

(Q. 2543)

"They passed resolutions, and I think you have a Memorial to "put in upon that subject?" "Yes, I will put in a Memorial "which was sent to the Lancashire and Yorkshire Railway "Company." (The same was handed in.)

(Q. 2544)

"Is the carriage of materials a very important element in the "cost of cotton manufactures?" "Yes, it is very important."

(Q. 2547)

"Will you state to the Committee the proportion which the cost "of carriage bears to the wages paid to the workpeople in the "production of cotton cloth?" "The cost of carriage, taking a "ton of cotton, is about 50s.; there are various transits between "leaving Liverpool and coming back to Liverpool if the article "is for export, or coming to London if it is for export."

(Q. 2548)

"Will you explain what you mean by these 'various transits'?" "In the first instance the cotton leaves Liverpool for the great "spinning centre, Oldham and the neighbourhood, that is the "first transit; then after it is spun into cotton yarn it goes to "Manchester for distribution and sale; it then goes from Man-"chester to the centres of manufacture, say to Blackburn or any "of the towns in N.E. Lancashire; and then when manufactured, "back from Blackburn to Manchester; and afterwards from "Manchester to Liverpool or London, if it is for export in the "grey to India, China, or elsewhere; that makes five transits."

Mr. Thomas Garnett, Stuff Merchant, of Bradford, and Chairman of the Railway Committee of the Bradford Chamber of Commerce, says, in reply to the following questions :—

(Q. 1291)

"Still foreign competition is the main reason why trade has "been so bad?" "We trace it to that." "Then I will ask "you whether the foreign trade in England, in worsted goods, "is so severely competed for by the other markets of the World, "that the cost of carriage from your district is a serious item, "and may readily affect the amount of your total exports?" "It is."

(Q. 1293)

"I believe your Chamber of Commerce has been alive to the "importance of this question for some years, and has appointed "a Committee of its Members to watch the railway rates, and, "as far as possible, to protect the interests of the district?" "It has."

(Q. 1294)

"Have other Chambers of Commerce taken joint action with "you in the matter?" "They have."

(Q. 1295)

"What Chambers of Commerce are those?" "Speaking from "memory, the Leeds Chamber of Commerce, Huddersfield, "Halifax, Wakefield, Dewsbury, Batley, and I daresay, one or "two others."

(Q. 1296)

"The Chambers of the district, in fact?" "Yes."

(Q. 1297)

"Will you kindly say to the Committee, what your complaints "against the Railway Companies consist of?" "They consist "of two points chiefly: the differential rates of carriage to "Bradford, and differential rates of carriage from Bradford."

(Q. 1298)

"What action have you already taken to get those various "complaints redressed?" "We have had interviews with the "principal railway companies, and have also had lengthened "correspondence with them, pointing out to them the differential "rates, and asking them to give us the relief to which we "considered we were fairly entitled."

The Borough of Rochdale, on the 30th May, 1881, addressed a memorial, from which the following is an extract, to the Select Committee on railway rates and fares :—

"The Mayor, Aldermen, and Burgesses of the Borough of "Rochdale respectfully bring to the knowledge of the Committee

"the position of this Borough in the matter of railway rates; "and beg leave to present a statement of the rates affecting the "same, contrasted with those affecting other places, whereby it "will be seen that the Borough entirely loses the advantage "of its geographical position, and is even, in some cases, "handicapped."

The Warrington Chamber of Commerce, memorializing the same Committee on the 22nd June, 1881, say:—

"Railway Companies possess a practical monopoly of the con- "veyance of goods, and though this may be inevitable it becomes "intolerable when unauthorised charges can be made which the "public can only protect themselves against by expensive and "protracted litigation."

The Borough of Preston, memorializing the same Committee on the 13th July 1881, say:—

"That Preston, one of the great manufacturing towns in Lanca- "shire, has for years suffered from the excessive charges for "freightage to and from the town.

"That as far back as the year 1865, the Town Council had "under their consideration the grievances that the town laboured "under by the charges made for the conveyance of passengers "and goods in the district.

"That another effort was made in the year 1878, when a "deputation was appointed by the Corporation to wait upon the "Directors of the two Companies, in conjunction with deputa- "tions from the following other towns, viz., Blackburn, Burnley, "Accrington, and Darwen, and the result of that interview was "that the Directors promised to consider the representations "made on the subject, and would communicate the result of "their deliberations.

"That subsequently a letter was received from the Secretary, "stating that the Directors would not be justified in reducing "the rates of carriage."

The Oldham Master Cotton Spinners' and Manufacturers' Association, on the 7th May, 1881, writing through their Secretary to the Select Committee, say:—

"I am instructed to represent to your Select Committee "that Cotton Spinners here are aggrieved at the high freightage "charges made and paid, between Liverpool and Oldham, for the "carriage of Cotton by rail.

. . . . . .

"This charge is excessive, considering the enormous business "done in Cotton . . . compared with what it was in "former years, and the freightage charge then made.

"Oldham to-day consumes more than one-fourth part of the "whole quantity of raw Cotton used in Great Britain, and con- "siderably more than one-fifth of the whole quantity of raw "Cotton imported into Great Britain.

" . . Notwithstanding this enormous business, " the rate of freightage has been increased rather than decreased. " In the year 1852, when Oldham contained scarcely half the " present number of spindles, the freightage of Cotton from " Liverpool to Oldham was 6s. 6d. per ton; shortly after it went " up to 9s. per ton. In 1866 it was 10s., and in 1872 it was made " into 11s. per ton; and though since then the increase in the " number of spindles has been nearly 60 per cent., no reduction " has been made in the rate of Cotton freightage."

" We wish to call attention here to the fact that the Duke " of Bridgewater's Canal Act only allows a maximum charge for " cotton of 6s. per ton from Liverpool to Manchester, yet the " rate quoted by that Company for carriage of cotton between " these two places is 9s. per ton, and I am informed this has " been charged to some of the Members of this Association; " 11s. 6d. being charged by Canal to Middleton Junction, a place " within the limits of this Association. We have to complain " that competition in the carriage of cotton is destroyed by the " fact that an agreement exists among the Railway Companies " which run through Oldham, namely, the Lancashire and " Yorkshire, the London and North Western, and the Man- " chester, Sheffield, and Lincolnshire Railway Companies, to " charge one uniform rate of freightage for cotton from Liver- " pool to Oldham, which is 11s. As this agreement appears to " have been acquiesced in by the Canal Company as well, we " have no way of dealing with the matter, only by falling into " the hands of the Canal and Railway Companies, and allowing " them to charge such rate as they please."

" Under these circumstances we urge that the rate for " freightage of cotton from Liverpool to Oldham should be " reduced at least one half—say 5s. 6d. per ton. I am instructed " to say that the cotton trade of Oldham is much hampered by " the present excessive rate of freightage for its staple article, " and that we hope this appeal will give us some redress."

Mr. Benjamin Walmsley, Cotton Spinner and Manufacturer, of Preston, gave valuable evidence (Q. 12047 to 12157) as to over-charges and excessive rates on Raw Cotton and Cotton Cloth to Bolton, Manchester, and other Lancashire towns.

Mr. W. A. Massey, shipowner, of Hull, in speaking of two Lancashire industries before the Select Committee, says, in reply to the following question (Q. 9915) :—

" Is the Wire-making industry of the country prejudiced by the " high rates charged by railway companies?" " Yes, the " Warrington Manufacturers lose a large amount of orders in " competing with the German Makers of Wire. I have fre- " quently met Warrington travellers in Russia, and they tell me " that the Manufacturers in Dortmund District run the

"Warrington Manufacturers very close. The distance from "Warrington to Hull is 109 miles, and the rate is 15s. a ton, "and from Dortmund to Rotterdam, which is a strongly com- "peting centre in the manufacture of wire, the rate upon wire "is 8s. 3d. per ton, the English rate being 1.651d. per ton per "mile, and the German being 0.651d. per ton per mile, the "English rate being 150 per cent. the higher rate. I have put "in a return of iron wire and other cargoes imported into "Cronstadt of foreign manufacture, to show how the English "manufacturers are affected by the competition."

(Q. 9916)

"Are the Lancashire Cotton Spinners affected by the rates?" "Yes; from Havre to Rouen the distance is 57 miles, and the "rate of carriage upon cotton is 5s. 7d. a ton, or 1.176d. per ton "per mile. From Liverpool to Bolton, a distance of 28 miles, "the rate is 9s. 4d. per ton, or 4d. per ton per mile; from "Liverpool to Oldham, a distance of 45 miles,* the rate is "11s. per ton, or 2.933d. per ton per mile. In one instance "the English rate is 200 per cent. over the French, and in the "other it is 100 per cent. over the French rates, and the same "will apply still more strongly to the Russian spinners for their "imports of cotton." (Reference to tables put in will show this.)

Mr. Richard Peacock, C.E., J.P. (of the firm of Messrs. Beyer, Peacock & Co., Engineers, Manchester), and Vice-Chairman of the Provisional Committee of the Ship Canal, said at a Meeting in the Old Town Hall, Manchester, on the 26th September, 1882:—

. . . . . .

"I feel that I cannot say too much as to the importance of "the scheme—I may say the national importance of the scheme. "For such a grand waterway as we have between Manchester "and Liverpool to be lying idle, practically now doing nothing "except conveying water and sewage down the Mersey, is to "my mind one of the most extravagant and bad uses to which "we can put nature. (Hear.) For a waterway is a far more "natural way than a railway. As a railway man I ought not to "support the waterway; but I do say there can be no question "that a waterway is a far more natural road than a railroad. "When once made, there are large expenses in connection with "a railway that are not to be found in connection with a water- "way. If you, gentlemen, would give yourselves the trouble to "go down the river from Manchester to Warrington, or, better "still, forward to Liverpool, as I have done two or three times, "you would come to the conclusion that it is a great shame, an "abomination in fact, to see such a grand valley and such grand "pools of water, as are to be met with between here and War-

* Should be 38 miles; and the proper per centages of excess of the two English rates over the French one are, in the case of Bolton, 240 per cent.; and that of Oldham 195 per cent.—*Ed.* "*Cottonopolis.*"

"rington, to be standing idle and of no use whatever. I can "only account for it by the fact that we happen to be well "provided with railways. No doubt our railways have done "very well for us since they were introduced, and have been so "satisfactory to everybody that the public have not had their "attention called to it, until we find them—and not only them but "more particularly Liverpool itself, which is the source of traffic "upon the railways—completely glutted with traffic, and that "to such an extent that it cannot be worked satisfactorily. "You all know that this has gone on increasing year by year "until now, Liverpool, with its five to seven miles of docks, has "become so enormous that it is with very great difficulty it can "work the traffic, and it is not capable of dealing with it satis-"factorily, either as regards time, and certainly not in an "economical way. When I tell you, as a Manchester trades-"man, having large dealings with our colonies at the "opposite side of the world, that I find it cheaper and "better to send my goods through Glasgow, though I pay "£30 an engine more by railway to get it to Glasgow than "to Liverpool, yet cheaper to send it by way of Glasgow—"and I am sending the goods by Glasgow rather than "Liverpool—I think that shows there must be something "wrong at Liverpool, or in connection with Liverpool "charges for rates and dues. (Hear.) If that applies to my "case, gentlemen, it applies to everybody else who has any "dealings with the rest of the world. I simply name this as a "strong illustration of the necessity for our having a more direct, "or rather our having a cheaper, communication with the rest of "the world that is approached by sea; that is to say, instead of "having to depend on sending everything to Liverpool by rail-"way, and through all the difficult and expensive channels in "connection with Liverpool, let us bring the sea practically up "to our own city, and load the vessels here, and send goods from "hence direct to any part of the earth we think proper, and "receive that which the world thinks proper to send to us in the "same direct way, instead of stopping at Liverpool, and being "tolled and delayed there, and having additional expense cast "upon us in consequence."

Mr. Peter Spence, J.P., of the Chemical Works, Manchester (and one of the Provisional Committee of the Ship Canal), gave very able evidence before the Select Committee on Railway Rates in 1881, but as it has been re-published *in extenso* in cheap pamphlet form, it is unnecessary to refer to it in detail.

He points out, however (Q. 10428), several instances of "excessive rates" for alum, copperas, and other chemicals, between Manchester and Liverpool;

that (Q. 10429) such high rates, particularly for alum, have "seriously crippled his foreign trade;" and that (Q. 10430) in consequence of this, he is now "very heavily handicapped in competing with French and Italian manufacturers, in the Indian market." He also points out (Q. 10430 and 10431) instances of "oppressive rates also to inland manufacturing towns." After citing many difficulties and hindrances to his business by the present methods of railway management, he concludes by saying :—

> "I consider the time has now arrived for Parliament to "say once for all to the Railway Companies, 'Hands off the "Canals.' . . . . England cannot, in the face of increasing "foreign competition, afford to see her cheapest means of internal "transit year after year closed against traffic."

[NOTE.—For some years past, since the navigation of the River Irwell passed out of the hands of the old Bridgewater trustees, all traffic has practically ceased, and it is now, so far as trade is concerned, a virtually disused waterway.]

It will generally be admitted that accumulated evidence of this character, from such unimpeachable sources, points unmistakeably to the urgent necessity which exists for a new, cheap, and supplementary means of transport between Manchester and Liverpool, not only as a means of relieving the present congestion of goods traffic, but of providing for the ordinary normal growth of the trade of the district.

And perhaps, as bearing on the question of canals as cheap means of transport, the following extracts from a Memorial dated the 31st March, 1882, from the Associated Chambers of Commerce, addressed to the President of the Board of Trade, may be of interest :—

> "If the suggestion of the Joint Select Committee of both "Houses of Parliament on railway amalgamation, 1872, be "adopted, namely that parliamentary encouragement be given "to independent canal companies to exercise compulsory powers "and re-purchase adjoining canals from railway companies, *a* "*grand and cheap system of water carriage might be created,* "*especially if steam were largely used for towing.*
>
> "The canals are specially adapted for the conveyance of "raw material and other heavy traffic, in which the time occu- "pied in transit is of comparatively little importance, a class of "traffic which the railway companies allege is not profitable for

"them to work, even at rates which would leave substantial "profit to canal carriers, if the tolls were fixed at a reasonable "rate."

. . . . . .

"The following resolution, relating to the emancipation of "canals from the control of railway companies, was adopted at "the annual meeting of the Associated Chambers of Commerce "of the United Kingdom, held in London on the 2nd day of "March, 1882 :—

> 'That in order that Commerce and Agriculture may 'be able to take every advantage of the easily and cheaply-'worked traffic of the Canals of Great Britain and Ireland, 'it is greatly to be desired that Canals be entirely emanci-'pated from the control of Railway Companies. The 'traffic on them requires no organization like that on 'Railways, and hence should be free from the control of 'Railway Companies, as the high roads now are, thus 'making Canals here what they are in other Countries, 'namely, the cheapest means of conveying goods and 'agricultural products to markets, and not the obstructive 'instruments of Railway Companies.'

"In conclusion, it is desired to draw the attention of the "Committee to the Report of the Joint Select Committee of "both Houses of Parliament, on railway amalgamation, 1872, "pages 23 and 24, where the subject of Canals is specially "referred to, and also to the evidence given before such Com-"mittee by Sir Edward Watkin, paragraph 4667, page 452, "where he says, 'If it can be proved that the advantage of a "navigation, which Parliament has given to the public, has been "taken away, I think that it would be quite reasonable, on "people coming to amalgamate, to say—'You shall give up "possession of this thing, which is not properly used.'"

There can be no reasonable doubt as to the advantages which the natural waterways existing between Manchester and Liverpool would be to the commerce of the district, if they were "properly used," if used at all.

The subject is of the most real and pressing importance to Lancashire. Indeed, it will be seen by the following extract from a report made in September last by Mr. Francis Roubiliac Conder, C.E., to the Directors of the Midland, Western, and Metropolitan Canal Carrying Company, Bristol, that other districts are taking up the question seriously :—

"To the productive industry of the country the question "of canal transport is yet more grave. It seems to me difficult "to look patiently and impartially at such facts as I have now

"brought before you, and as those advanced in my report to "the Wolverhampton Chamber of Commerce, without coming "to the conclusion that has been so pointedly expressed by the "eminent Belgian statesman, M. Le. Hardy de Beaulieu. Half-"a-crown a ton, as any man of business knows, is enough to turn "the scale of an order for rails, for castings, for many kinds of "heavy productions. How many half-a-crowns per "ton are put upon the productions of Man-"chester by the Railway "policy?" To Liverpool "alone the freight now charged by the Associated Railway "and Navigation Companies is 7s. 6d. for what, in 1860, "was carried for 2s. 6d., and could be carried by canal for "1s. 3d. From Manchester to Glasgow the rates are pro-"hibitive, as may be seen by the clear and uncontradicted "evidence given before the Select Committee on Railways by "Mr. Peter Spence.

"The present movement in favour of the re-opening of our "canals for traffic may succeed, or may fail. But failure will "involve the sure, and not very slow, impoverishment of Bir-"mingham, Wolverhampton, Manchester, and all great inland "centres of productive industry. Steel works, iron works, "cotton works—even the leather industry, are rapidly migrating "to the water-served valleys of the Clyde, the Tyne, the Wear, "and the Tees. With France and Belgium able to carry, at "cost price, on canals, it is only by adopting the same cheap and "easy mode of transport that English manufacturers have any "chance to hold their own. It is not that the railways (when "too late) may not do their best to remedy the want. But it "will be as much out of their power to do so, as it is contrary to "the fatal policy avowed by their managers before the Select "Committee on Railways. Unless our fine and well-designed "system of inland water carriage be restored to its former "activity, the industry of England will seek the seaboard; and "great manufactures, and great cities, will soon only be found "in our island on the side of navigable waters."

Economies of all kinds are being effected daily in mills and manufacturing establishments in Lancashire, and enormous savings have been effected in all departments continuously since the time of the Cotton Famine. Why should not economy of transport, therefore, be considered in these days of keen competition in manufactures?

It has been shown that, so far from the cost of transport having kept pace with these reductions in cost of manufacture, it has increased.

The saving of carriage by water over carriage by land has been estimated by competent authorities at as much as *sixty-seven per cent.* of existing land carriage

rates, which, upon cheap bulky articles like timber, coal, &c., means all the difference between profits or no profits on the sale of such materials.

"Plateways," and similar ingenuities of mechanical skill, are mere palliatives of the real difficulty. They do not extinguish either of those elements of cost, haulage of goods and maintenance of an iron road; whilst they introduce, in the case of the "Lancashire plateways," complexity and confusion by the needless subdivision of cargoes, since it will take about thirty full train loads to convey as much merchandise as one moderate-sized vessel will carry at once, and in the same tide as would enable her to dock at Liverpool. Besides, this "Lancashire plateway" scheme leaves untouched the one besetting evil of the existing heavy taxes on transport, viz., the Liverpool dock and terminal charges, which are as great, if not greater, than those of the railway.

The wholesale interference with valuable property, and the numberless crossings of roads and highways which such schemes involve, as compared with the simplicity and ease of partially following the course of a natural river, which merely requires improving to adapt it to modern wants, is sufficient to convince any reasonable mind as to which plan offers the maximum of advantage.

Neither the railway nor the dock authorities need be seriously alarmed by the prospect of the Ship Canal. There is yet "room enough for all," as the London and North-Western Railway maintained when they applied for powers to make docks at Garston.

There are, for example, many large undeveloped sources of trade, which will provide ample return cargoes for ships using the Canal, without taking a ton of traffic off existing lines. There is the great Yorkshire coalfield, with its 400 or 500 collieries working at half time, and at half-producing power. With little or no effort it could easily find at least twenty million tons of coal for export, by reason of the port of shipment being brought thirty miles nearer to it. Sheffield, with all its hardware; Leeds,

Bradford, and other towns with their woollens; all of which are handicapped in coming westward by heavy and virtually prohibitive railway charges, will have a chance of coming nearer to a port at less cost than at present.

The Derbyshire, Nottinghamshire, and Leicestershire coalfields, and the Staffordshire potteries, will also combine to afford plenty of occupation for ships using the Canal.

Liverpool will, therefore, have trade enough and to spare left her. Let her remember the fact that, though some people predicted the disappearance of horses on the opening of railways, yet there are more horses now engaged in transport in the United Kingdom than there were in the days before railways were constructed. Ten years ago the "Telephone" did not exist, yet hardly any town where it is now used could suffer its loss for a day without considerable inconvenience.

By the time the Ship Canal is made, the railways will hardly be able to accommodate, with safety and efficiency, the passenger traffic which, by the natural growth of trade and population, they may reasonably expect to have to carry. Already the lines are crowded in quick succession with a series of perhaps the finest services of fast express trains to be heard of anywhere in the world. These trains are so numerous, and so scrupulously timed, that applications for temporary or special accommodation by passengers are frequently declined, on account of the "impossibility of putting on another train," or adding any more stoppages at stations by existing trains.

It was only about seven or eight years ago that the Cheshire Lines Committee opened between Manchester and Liverpool their lines, which the other Companies previously believed would virtually "ruin them;" and yet the London and North-Western have since spent millions on enlarging stations at Manchester and Liverpool, and they are now engaged doubling one of their lines, it being acknowledged on all hands that the existing lines are "choked."

Few people have any idea of the enormous

growth of passenger traffic on English railways during recent years. The number of passengers carried—

In the year 1866 was... ... 274,293,668 and
„ „ 1880 „ 603,884,752

Showing an increase of over 120 per cent., although the number of miles of railway opened had increased only 29½ per cent., and the traffic receipts only 62½ per cent.

Taking the mean annual ratio of increase of passengers carried in excess of the ratio of increase of miles opened at say 6½ per cent. per annum throughout the entire kingdom, it is obvious that in a little over 15 years the enormous volume of passenger traffic between Manchester and Liverpool will be at least doubled, if not trebled, having special reference to the density of population, the conditions of trade, and other local causes, necessitating greater and more immediate business intercourse between the people of the various towns than is usual with people living long distances apart, and without any particular community of trade interests.

Under any circumstances, even if a little competition at the worst, be introduced, it can hardly harm the railway companies.

Sir Edward Watkin, M.P., no mean authority, pronounced it good over ten years ago, in the following evidence before Parliament (6th March, 1872), wherein he also deprecated any combination amongst railway companies to defeat new efforts at competition.

"Select Committee on Railway Companies' Amalgamation."

Page 449 (Blue Book, 364.)

(Q. 4639)

"You think that the public may trust that that competition "will continue? I think so; and if it did not, it would be under "these circumstances that you would have another line. Always, "remember, I have never been an advocate myself for saying "that if you amalgamate railway companies under any condi- "tions that you impose, if anybody chooses to come to Parliament "with a bill, to lay out a million of money, which can be shown "to pay anywhere, Parliament shall refuse it; it is for Parliament "to see whether it is really necessary, and if it is necessary, I "think that no stronger case could be made by the companies "against themselves than such a combination as seems to be in "the mind of the honourable member."

(Q. 4640)

"At all events, whether the security afforded by competition "to the public be a good security or a bad one, it is the only "one that they have?" "I think so. I cannot imagine any "external authority which could in any way operate in the same "way as the natural law of competition. It protects us—is all "but our only protection—in everything that we buy, and sell, "and do; and I do not see why it should not protect us in "railways. I know that where it has been applied it has been a "protection."

Some people imagine that if the Ship Canal is made it will become identified in interest with the existing railway and canal companies. There is hardly any fear of another important canal passing into the hands of railway companies now-a-days without good and sufficient reasons. Since the evidence referred to in preceding pages was given in 1872, and since the Bridgewater Navigation has been acquired by a company (acting originally in the interest of the Manchester, Sheffield, and Lincolnshire and the Midland Railway Companies) an Act entitled the "Railway and Canal Traffic Act, 1873," has been passed, by clauses 16 and 17 of which it is enacted that no railway or canal company shall, without the sanction of the Railway Commissioners, enter into any traffic arrangements whereby the control of the rates is given to a Railway Company; and it further enacts that the Commissioners shall withhold their sanction from any such agreement which is in their opinion prejudicial to the interests of the public. This enactment, coupled with the strong recommendations of the Parliamentary Select Committee on Railways, 1881-1882, and the resolutions of the Associated Chambers of Commerce, against the railway companies ever again acquiring control over canals or waterways, is a sufficiently effectual safeguard of the freedom of competition by water.

CHAP: II.

WILL THE CANAL PAY?

IT is impossible ever to predict with certainty whether any new undertaking will pay before it is made and in operation.

No scheme was ever yet submitted to Parliament where the companies or promoters could submit evidence of anything else beyond that of reasonable probability of its paying. An axiom which is universally quoted by eminent railway and dock authorities is that "Facilities beget trade," "Provide accommodation and trade will follow," "Trade makes trade," and so forth.

Once provide the facilities and trade will speedily follow. Who would have predicted ten years ago that the tonnage of ships passing through the Suez Canal would have increased from half-a-million to $5\frac{3}{4}$ millions —over eleven fold—and that the revenue would have increased ten-fold, over two millions sterling annually being now received in toll dues.

In the same period the tonnage and revenue of the Liverpool Docks have increased:

	Tonnage.	Dock dues.
From the year 1871	6,131,745	£789,031
To ,, 1881	7,893,948	966,281

The growth of the Clyde and Tyne ports in the same decade is even more marvellous still.

Few people understand the cheapness with which traffic can be carried on canals. In France it has been proved that for a little over a third of a penny (·38d.) per ton per mile, goods can be profitably carried by

canal. The Suez Canal is worked at about 6 per cent* of its receipts, whilst English Railways absorb in expenses from 50 to 55 per cent. of their receipts. There is no reason why the Manchester Ship Canal, if made, should absorb in working expenses more than the same percentage of its receipts as the Suez Canal, as it will not be dependent in the same way as that canal is upon costly foreign labour and appliances to work it. However, 15 per cent. may be assumed for the present.

The capital required to be raised for constructing the Ship Canal, according to the engineer's estimate, is £5,160,000.

This will not all be required to be subscribed at once, we presume, but be spread over the period of construction, say four years. During this time interest, as part of the legitimate cost of construction, will doubtless be paid to the shareholders.

This will swell the cost to about £5,750,000, and allowing another quarter of a million (in addition to a sum of £469,090, or 10 per cent., already included in the Engineers' estimate) for all classes of "contingencies" which cannot be foreseen, we arrive at a sum, roundly speaking, of six millions; of this sum one-fourth will probably be raised on mortgage debentures, as is usual in such cases. Therefore to arrive at some rough and ready sort of an estimate of what would

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* As this statement has been slightly impugned by the *Pall Mall Gazette*, the exact figures, as obtained from the official balance sheet of the Suez Canal Company, for the year 1881, are as under :—

		Francs.
RECEIPTS :—Service du transit et de la navigation		...51,737,718·33
EXPENSES :—Service as above — Fr. 1,664,799·28		
Administration—		
France and Egypt	Fr. 1,140,662·73	
		2,805,462·01

Which is less than 5½ per cent. of the receipts. There are other items of outgoings (viz., "charges soc ales," fr. 11,601,725·71, and others), but as they represent interest on bonds and other obligations, or depreciation and sinking funds, or lands or plantations under the head of "Service du Domaine," &c., &c., they are not brought into the above calculation on either side of the account.

be required to make this Canal pay, we must take:—

Interest on Capital:—		
£1,500,000 on mortgage, say at 4½ per cent ...	£67,500	
£4,500,000 share capital, say to yield 6 per cent.	£270,000	
		£337,500
Working Expenses:—		
Say at 15 per cent. of gross receipts		£59,558
Annual income required		£397,058

This is at the rate of about £1,088 per day, and such sum would cover (*a*) toll upon ships and cargo passing along Canal; (*b*) use of docks, quays, &c., by the ships, but would not include wharfage, warehouse rent, &c., on cargo, which would vary according to the class of goods, and the nature of the services rendered.

To earn this, £397,058, would only require one moderate-sized vessel, of say 3,626 tons, to pass along each way per day at a toll of 3s. per ton, as compared with the existing heavy dock dues on ships at Liverpool, plus the railway charges on the cargo, or altogether 22s. 4¾d., viz., 10s. Liverpool charges; 9s. railway carriage; 1s. 6d. cartage in Manchester; and Dock Board's dues on ship, 1s. 10¾d. per ton.

The Liverpool dock dues on ships and cargo alone, for the year 1881, averaged £2,647 per day, and the tonnage of vessels entering the docks, 21,627 tons per day. This tonnage passing both ways, say along a canal, would give an average of 43,254 tons per day. It can also be seen, by the Board of Trade returns, that out of £87,816,539, the value of British exports from Liverpool in 1881, over one-half, or £45,165,630, consists of cotton manufactures shipped direct from Manchester. The proportion would be still greater if cotton goods to the value of £31,799,505 were not diverted to other ports, partly in consequence of causes already pointed out by Liverpool mercantile authorities.

Indeed, out of the leading articles of manufacture, such as cottons, metals, woollens, linen, chemicals, machinery, &c., largely made in Lancashire and the West Riding, and valued at over one hundred and fifty millions sterling, Liverpool exports little more than one-third, the rest going to the Thames, Southampton, the Humber, &c.

Assuming, however, that Liverpool possessed the whole of the Lancashire, &c., trade, and that the volume of that trade is likely to remain stationary and never increase, the cotton manufacturing districts, of which Manchester is the shipping centre, could still fairly lay claim to at least one-half of the Liverpool exports, and with them a commensurate proportion of the tonnage of shipping employed in carrying them. If that proportion be taken both ways at 20,000 tons a day, it is five and a half times more than would be required to pay a 6 per cent. dividend on the Share Capital of the proposed Ship Canal, or certainly three times as much as would be required even if the expenses came to 50 per cent. of the receipts, instead of 15 per cent. as assumed.

Mr. Alfred Holt, of Liverpool, the projector of the "plateway" scheme, estimates the traffic between Manchester and Liverpool at 35,000 tons a day, or 12,000,000 tons a year. This estimate is known to be unscientifically compiled, and the data is insufficient. The statistics of traffic point to a different result; but still it shows what a large share of trade Liverpool is even prepared to concede to Manchester, and disposes of the statement that Liverpool "gets its trade equally from all parts of the country."

There are only practically five effective carrying agencies to Liverpool; and if the Ship Canal become a sixth, and only take its fair share of the above traffic—viz., 2,000,000 tons a year—at say 5s. per ton (as against 10s. 6d. on cargo and 1s. $10\frac{3}{4}$d. on ships at present charged), it would yield sufficient to pay over $8\frac{1}{4}$ per cent. on the Share Capital.

Another way of broadly viewing the question of probable profit, without too scrupulous a regard to the niceties of detail and elaborate statistics of traffic, which are only suitable for the critical examination of a Parliamentary Committee, is to consider what is the present capital employed in the docks, railways, and canal between Manchester and Liverpool. The Mersey Dock and Harbour Board's bond debt in July, 1882, was £16,373,451 3s. The Bridgewater Canal nominal capital (partly called up) is £950,000, but the railway published accounts do not give any separate particulars of the capital spent up to date on the various lines and stations to Liverpool. Mr. Findlay said, in his evidence before Parliament, that the London and North-Western Company had spent upwards of £2,000,000 upon stations in Liverpool, alone, within the past few years. Other companies have also costly lines and stations.

Probably, having regard to the mileage of lines between Manchester and Liverpool, and the average cost of similar lines, and terminal accommodation elsewhere throughout the United Kingdom, £10,000,000 would not be an extravagant estimate of the total amount expended by the railway companies. Altogether, we may roundly take the expenditure on docks, canals, and railways, at and between Liverpool and Manchester, at not far short of £27,000,000. Mr. Forwood, it has already been shown, considers that some of the railways earn 10 per cent. nett profit on their traffic to Liverpool. The Canal Company paid an average dividend on its ordinary shares in the year ending July, 1882, of over 6½ per cent., and has previously paid higher dividends.

Is it unfair, therefore, taking a large and comprehensive view of the question, to ask that if Manchester forwards, through Liverpool, goods to the extent of half the value of the entire cotton exports of the Mersey, cannot she find trade enough to pay 5 or 6 per cent. on about a fifth of the above capital of 27 millions?

But surely, apart from this, is there not trade enough for a new and additional dock and carrying agency? The railways, it is said, are "choked;" Mr. Guion, a large shipowner, said on the 11th May, 1882, at the Mersey Docks and Harbour Board, that, notwithstanding the opening of the New Docks at the North End of Liverpool recently, they "were still short of the space required at their hands." They cannot extend further seaward without increased danger to shipping, and at enormous cost. Liverpool loses undoubtedly much of the Lancashire trade already; but still the aggregate body of trade in Manchester increases with undiminished strides, though with a decreasing margin of profit.

Will not people ten years hence, in the event of the Canal being made, smile at the fears and doubts which are expressed by some timid people of the present day?

That the Canal will pay in many ways besides in dividends is unquestionable. It will be a great boon to many employers in the saving of cost of transport. It has been computed that in the case of some large firms they would get back in the saving of carriage alone, the amount of a very handsome subscription to the funds of the Ship Canal project in one year from the date of the opening of the Canal.

The town of Oldham says it "pours £320,000 into the lap of Liverpool and the railways every year," and that it consumes 160,000 tons of raw cotton. A saving of even 5s. a ton, at least, out of 40s. 3d.* on this large quantity of material, would mean £40,000 a year left in the pockets of the Oldham spinners. Surely Oldham has every ground for subscribing handsomely to the Parliamentary Fund of the Ship Canal. One Manchester firm also exports 16,000 tons of piece goods annually through Liverpool. Such firms, or their consignees abroad, ought also, in like manner, to subscribe.

* This is given on the authority of an Oldham correspondent. See page 8.

It is a matter, however, of vital concern for every man, down to the humblest artizan in the district, to have the facilities for obtaining cheap food increased, and opportunities provided for greater and more varied employment, such as are found on the Rivers Clyde, Thames, Tyne, Humber, &c. Liverpool admits that it only exists because it is adjacent to the manufacturing districts. How much more benefitted, therefore, are Manchester and the adjoining inland towns likely to be when ships and docks are brought some thirty odd miles nearer to them than at present?

An eminent scientific authority some few years ago, on opening an Exhibition of Machinery and Implements in Lancashire, said that the standard of mechanical skill and quality of the work done in the machine shops of Lancashire was the highest in the Kingdom. Who can tell the enormous advantages which would arise from the introduction of shipbuilding and other trades into the midst of such an industrious and inventive class of artizans?

The capital required for the Canal does not amount to £1 per head of the population resident within a radius of forty miles around Manchester. As the shares would doubtless be of the nominal value of £10 each, and as many people in Lancashire, Yorkshire, Staffordshire, and Cheshire would probably take at least fifty or hundred shares each, to say nothing of the number likely to be taken up in London and other parts of the Kingdom, it follows that if all cared to become shareholders there would not be more than one share left to every hundred of the population of Lancashire and district. When it is remembered that the shares for undertakings of this character are usually only required by easy instalments spread over three, four, or perhaps five years (or an average of say fifty shillings per share a year), it does not seem unreasonable to conclude that for every pound so subscribed the amount would be doubly repaid by the innumerable material advantages which would be brought home to every one by the opening up of the Ship Canal.

The risks attending a subscription to the £100,000 Parliamentary Fund are infinitesimally small, as the terms and conditions offered by the Provisional Committee, as to allotting shares to subscribers, or re-paying their subscription in the event of the capital being raised, and as to allowing 3 per cent. interest in the meantime, are excessively fair and even liberal.

Besides the whole amount will not be wanted for actual expenses. It is believed that the Provisional Committee will not call for more than one-fourth of the amount, and that only at intervals between now and July next.

Small subscribers of single amounts of less than 10s. can, we are informed, buy "shilling coupons," which are transferable; and can afterwards exchange them for official receipts, entitling the holder to an allotment of shares when the Act is passed.

CHAP. III.

Observations in Reply to Recent Objections.

CAN THE CANAL BE MADE FOR THE MONEY?

THE ENGINEERING ESTIMATE IS £5,160,000, including 10 per cent. for Contingencies.

[Under Chapter II., "Will it Pay?" a further sum for contingencies and interest is put down, in discussing the probability of the Canal paying.]

THIS general sort of question, often asked by interested opponents of the project, is more easily advanced than answered.

Every Engineer who is at all trained in his profession, and cares to discharge its obligations honourably, endeavours as far as experience, skill, and judgment will enable him, to give, in the vast majority of cases, not only a fairly true and reliable estimate of the probable cost of works committed to his charge, but invariably errs on the side of providing amply for possible excesses, under the general phrase "add contingencies 10 per cent."

There are a great variety of reasons why, in the case of the Ship Canal, the estimate may be especially regarded as reliable, of which the following summary embraces a few, viz.:—

FIRSTLY:—The painstaking care with which the details have been worked out: The writer is indebted to the personal kindness of Mr. Leader Williams for having seen the enormous mass of figures, filling a foolscap book of many hundred pages, of the most elaborate calculations and data of every detail of the works. Borings have been taken in an immense number of places, in order to ascertain the quality of the

strata in the bed and sides of the river, and other places which have to be deepened, widened, &c.

Surveys, measurements, and quantities have also been taken, and worked out most accurately, and prices have been worked out on the soundest and most business-like basis, and the amplest margin has been allowed in every instance for possible advances in the prices of labour, materials, &c.

SECONDLY:—These estimates have to be submitted in detail to the Examiners on Standing Orders in Parliament, and be subject to their criticism.

THIRDLY:—These estimates have been independently checked by several of the most eminent engineers of the day.

FOURTHLY:—The estimates will be subject, before the Parliamentary Committees, to the most searching adverse criticism and dissection at the hands of eminent engineers appointed by opposing companies.

FIFTHLY.—That, inasmuch as the proposed Act of Parliament will only take power to raise sufficient capital to execute the works laid down in the estimates, any excess of cost will have to be covered by a subsequent Act of Parliament in later years, an application for which it is competent for Parliament to throw out unless good reasons can be shown for any excessive expenditure that may possibly arise hereafter.

SIXTHLY:—That excesses in engineers' estimates are mainly caused by additional works or extended accommodation being frequently ordered by boards of directors and other governing bodies, during the progress of works, over and above what had been contemplated in the original estimates of the engineers. These enlarged works, let it be said, however, in justice to directors and others, are often the result of sagacious foresight on their part in providing for still

larger future accommodation to meet the growing wants of trade than their engineers had cared to pledge themselves to at earlier periods. Still, they nevertheless cause the engineers' estimates to be exceeded to some extent.

SEVENTHLY:—Another reason, involving considerations of a more personal and perhaps delicate character, viz., that of "professional pride," is to be found in the desire of every Engineer to finish works within his estimates.

Very often Engineers read before the Institute of Civil Engineers papers on the features and details of large works under their charge; which papers, after being openly debated by competent Engineers at a meeting of the Institute, are placed on the transactions, and printed, along with maps and all facts and statistics. An Engineer does not like, a few years afterwards, to see his predictions falsified either in cost or execution.

EIGHTHLY:—Another reason, and perhaps the most practical of all to the minds of non-professional men, is to be found in the fact that in these large works the rate of remuneration paid to the engineer is often fixed by a per centage on the amount of his estimates, not on the ultimate cost.

These few reasons embrace some of the most wholesome incentives to an engineer to make his estimates at the outset as complete, as comprehensive, and as reliable as it is possible for them to be.

The statements sometimes made by inexperienced people that estimates are "doubled and trebled," are utterly groundless as regards works of the magnitude of the Ship Canal, where innumerable precautions, seldom required in small jobs, are taken to ensure both the best talent, and the most trustworthy and reliable work; and in regard to which the keenest criticism of able and experienced opponents is brought to bear if possible to expose any shortcomings, and thereby jeopardise, if not defeat, the project in its passage through Parliament.

APPENDIX I.

The following Article from the Commercial Columns of the MANCHESTER GUARDIAN, *of Tuesday, 17th October, 1882, is a valuable contribution to the discussion of the question, "Will the Canal pay?"*

"OLDHAM AND THE SHIP CANAL."

An Oldham Correspondent writes:—

"'Is not Liverpool about the dearest port in England, if not the dearest?' asked Sir Edward Watkin, when the recent Railway Commission was sitting in London. The answer given by Liverpool was equivocal, nor did it face the question. Liverpool is the dearest port for cotton in England. Who is able to tell what it costs to pass a ton of cotton through this port? Let Mr. Findlay, manager of the London and North-Western Railway Company, testify as far as he knows about Liverpool dock and town dues:—1st, tonnage, 1s. 5d.; 2nd, discharge, 9d.; 3rd, dock and town dues, 3s. 6d.: 4th, cartage, 1s. 3d.; 5th, master porterage, 1s. 2¼d.; total, 8s. 1¼d. per ton. Let those who have imported cotton refer to their invoices, and in addition to these charges they will find perhaps 'attendance at ship and forwarding,' 1s. per ton; 'proportion of watchman's wages,' 4d. per ton; 'special rent on quay,' ½d. per yard per day—for a week perhaps 4d. per ton; 'insurance on quay,' 1s. per ton; 'Custom's entry,' 1d. per ton; 'weights, &c.,' 1¾d. per ton; total, 1s. 10¾d., or 10s. per ton altogether. How many items are omitted is not known, nor perhaps could anyone in or out of Liverpool supply them. It is true that dock dues were being revised when Mr. Findlay was under examination, but, as he remarked, a revised list does not necessarily mean a reduced list. This new list was issued in January of the present year, but the information it gives is so defective as to be altogether misleading, and while some of the charges mentioned appear to have been modified, there is no material reduction. If the figures given are not strictly correct it is because so much difficulty is experienced in getting information, as no one is supposed to know them except those who charter their own ships. These harbour charges are excessive, not only as compared with other ports, but as comparing cotton with other imports. The harbour charges on cotton passing through Liverpool in the ordinary way cannot be far short of 10s. per ton; some of the items may be rather overdone, but there are others which are not taken into account. The next

charge to which cotton is liable is the buying and selling brokerage, which is 1 per cent. in all—or say 12s. per ton. The next item is an unknown quantity—namely, that of sampling and reweighing. Who that has travelled the length of the docks in Liverpool has not noticed the thousands of bales lying on the quay exposed to the elements and soaking in that moisture which heaven sends Liverpool in such abundance? It has been known that bales have stood tapping for samples to the extent of 4lb. each after having been well soaked in the rain. Thus the rain makes up for what the sampling takes away. For this reason the cost of sampling must always remain a mystery. One fact, however, may be taken into consideration, and that is that people who have been doing a direct business with those who have bought cotton from the plantations have found that the difference in weight between that cotton and cotton bought through Liverpool has in itself been equal to a dividend. There is no desire to overstate the cost of Liverpool sampling, and if taken as being equal to one of the commissions—say 6s. per ton—perhaps it is rather under than overstated. So that up to this point it costs **28s. per ton** to pass cotton through Liverpool. To this we have only to add 12s. 3d. for delivery of cotton at the Oldham mills—say 11s. station to station and 1s. 3d. for cartage at the Oldham end—making a total of 40s. 3d., or 483 pence per ton. Now a ton of cotton, with 15 per cent. loss in waste, will produce 1,904lb. of yarn, which, at a ¼d. per lb., comes to 476d., so that the Liverpool and railway charges are over ¼d. per lb. on every pound of yarn spun in Oldham. In other words, cotton spinners and limited companies in Oldham have to make ¼d. per lb. on every pound of yarn they spin for Liverpool and the railway companies before they begin to make anything for themselves. Let us now see what a tax this is on the capital of some of the limited companies. The average producing power of a single spindle is about 38lb. per year, which at ¼ per lb., is 9½d. per year. This would be equal to a dividend of over 6½ per cent. for a company with £15,000 paid-up capital and 25,000 spindles, or nearly 8 per cent. on a paid-up capital of £30,000 and 60,000 spindles. At a very moderate computation Oldham district contains eight million spindles engaged in spinning raw cotton. These consume 800,000 bales a year, which, taken at five bales to a ton makes a total of 160,000 tons. **Taking the Liverpool and railway charges as above, at £2 per ton, it gives a total of £320,000 which Oldham pours into the lap of Liverpool and the railway companies every year.** These statements may be somewhat astounding, but they may be taken as not far from correct. If Liverpool be such a burden on Oldham, which in every respect is so well prepared for standing competition, what must it be in those places where both mills and machinery are considered to be behind the times? **It almost seems as if it would pay Oldham to take up the making of the new Ship Canal on its own account.** It must not be supposed that cotton can be brought to our mills for nothing, but it must be apparent that there is great scope for retrenchment in this direction. Now that the Ship Canal is put before the public in a practical shape, the great cotton industry of Lancashire will have itself to blame if it allows this opportunity to slip."

The MANCHESTER GUARDIAN *of 24th October, 1882, also contains the following further letter from the same Correspondent in Oldham :—*

LIVERPOOL DOCK & TOWN DUES.

"The commercial public seem to know very little of the imposts which goods passing through Liverpool have to bear. Keeping closely to facts, a concise account may be given of them. Sir Edward Watkin, at the recent Railway Commission, asked Mr. Forwood, then Mayor of Liverpool, 'Is it not a fact that those (Liverpool) docks have been built and are being extended year by year from a tax upon the traffic of the world?" "No doubt," was the remarkable answer. The history of this tax may be briefly condensed from the evidence of Mr. Findlay, as follows :—Anchorage and lighting charges were granted Liverpool by very old charters. The first Act with regard to dock and town dues was passed in 1708-9. There was frequent legislation on these down to 1851, when an Act was passed relative to the Managing Committee, which did not work satisfactorily. In 1857, an Act was passed for merging the docks of Liverpool and Birkenhead into one estate. This resulted in the appointment of the present Dock Board, and the election of various trading interests in Liverpool. The result of this was that the Mersey Dock and Harbour Board had to compensate the town of Liverpool for the vested interests it had acquired during the whole of the previous period of nearly 150 years. And they actually pay the interest on the sum of one and a half millions to the town of Liverpool for relinquishing and transferring the town and anchorage dues and the landing stage. This is either being paid in principal, or interest is being paid on it. Then there was the sum of £1,143,000 raised on this security, and it is said this money purchased Birkenhead Docks, which had previously been a losing concern. All these charges have to be paid out of the current trade of the port. The interest is paid to the Liverpool Corporation, and presumably spent for town purposes. Thus interest is paid on nearly three millions sterling, which is practically a charge on the traffic passing through Liverpool, and from which the trade itself derives no benefit whatever. Mr. Forwood describes the Liverpool docks as a national trust. No public body receives any benefit from them. Bonds are created which bear interest at 4 per cent., and besides this there is a sinking or depreciation fund of £100,000 set aside every year. No profit appears to be made, and, according to Mr. Williamson, the dock rates are only reduced when there is a surplus of revenue. Mr. Gregory asked if the town dues were in lieu of the rates of the town. Mr. Forwood replied, "Yes ; practically they were in the same position." The kernel of the whole subject lies in a statement made in the shape of a query to Mr. Williamson by Sir Edward Watkin, as follows :—"You make no profit because you have the town dues on your shoulders, and probably spent a great deal too much money upon it (the Trust). That is to say, your trade to some extent is suffering from mortgage." And thus Sir Edward answers his own question :—"Is not the tax on traffic in Liverpool higher than is inflicted on commerce in any other port in England?" The result of all this is shown in two questions by Sir Edward Watkin to Mr. Williamson. Question : "Now, I presume

you will agree with me that the cost of land for all purposes has enormously increased?" Answer: "It has." Question: "I think I am not wrong in saying that very recently the Dock Trust have sold to the Midland Company land at about £6 per yard, or £30,000 an acre?" Answer: "Yes; but it is hoped that the Midland Company will make money out of it, or else they would not come there?" So much then for the dearest port in England. How long the trades of Lancashire will submit to be taxed for the benefit of over-mortgaged Liverpool remains to be seen. It is an evil which is likely to work its own cure. The charge of dearness against Liverpool is not, however, the most serious that can be made. While Liverpool has been expending all this wealth on itself it has been neglecting to keep up with improvements in machinery. People may put up with a dear thing if its qualities are good, but they will not long be imposed on by something which is dear because it is not efficient. Liverpool does not appear to have kept pace with the times. Vessels have to wait outside the bar at Liverpool in the same barbarous manner as they did in the time of Julius Cæsar, while other ports have overcome such natural obstacles by engineering skill. This is modestly hinted at by Sir Edward Watkin. He asks, "What is the reason that certain ports land and discharge alongside quay while you Liverpool gentlemen are obliged to use tugs and lighters? If I come by Cunard or other steamer to Liverpool I have first very often to wait off the bar outside; 2nd, I can only get into the river at a certain state of tide; and 3rd, I have to wait there till the tug comes alongside, and I am taken in that tug with my baggage to the quay." He instances Grimsby, with its engineering appliances, and shows that if Grimsby and Liverpool were equi-distant from Manchester Grimsby would get the whole trade. Moreover, for twenty-five to thirty years after the opening of the Liverpool docks there have been no tramways or engines working round the docks. Well might Mr. Williamson consider such questions irregular. It thus appears that on the testimony of Sir Edward Watkin and Mr. Findlay, Manager of the London and North Western Railway Company, Liverpool has a far more serious fault than that of dearness namely, that of being "ramshackle." If this matter only concerned Liverpool itself no notice might be taken of it. But seeing that it is a serious clog on every industry in Lancashire and the adjoining counties, the remedy for this evil can neither be too drastic nor applied too soon. This is a grim satire on the speeches of those well-intentioned Liverpool gentlemen who the other day were claiming for themselves to be arbiters of the great cotton industry, and for Liverpool that it should be the great centre of the world for cotton. Liverpool ought at least to carry its own burdens, or rather the burden of its own dear self; and there can be no better appeal to Parliament than that the struggling industries of Lancashire should be delivered from this load, and be empowered to construct a port of their own, which shall be free from these encumbrances. The latest encumbrance proposed is the purchase of the pilot interest on the Mersey, it being seriously considered reasonable to give about £150,000 for twelve old boats averaging 28 years' service. What of that? The wealthy cotton spinners and others will furnish the money."

APPENDIX II.

Extract from the Report of the Joint Select Committee of the House of Lords and the House of Commons on the Railway Companies Amalgamation, 1872, *showing how the Bridgewater Canal undertaking became a Limited Company :—*

(2) COMPETITION BY CANAL.

. . . . . .

"Parliamentary notices have been given (which are printed "in the Appendix) of Bills authorising the sale of the Bridge- "water Canal to a Joint-Stock Company, but no Bill has been "introduced, nor has the Committee had any evidence of the "nature of the transaction. It has, however, been stated before "this Committee that the sale is believed to have been effected, "and that certain railway companies are concerned in it. "What may be the truth of these rumours, and whether the "transaction be one for the public interest or not, the Committee "are unable to say ; but they have no hesitation in expressing "an opinion that no such transfer of the ownership and manage- "ment of so important a channel of traffic as would place it "virtually under the control of a railway company ought to be "made without the express sanction of Parliament.

"It should further be mentioned that there are certain cases "of navigable rivers where the navigation is in the hands of a "public trust, and where, so long as the navigation can be "maintained at all, there is always likely to be competition. "Such are the cases of the Thames, Weaver, Severn, &c., &c."

Extract from the evidence of Mr. William Cawkwell, General Manager of the London and North-Western Railway Company, as a supplement to the above:—

(Q. 6740)

"Are the canal tolls high ?" "The canal tolls are high on bale "goods on the Rochdale Canal, but I do not think that the other "tolls are high at all. The principal parties who carry upon "that canal will be the Duke of Bridgewater's agents, and as "agents of the Duke's Trustees they carry traffic to such places "as Rochdale and Todmorden from Liverpool, and they have "always continued to do so. The Duke's Trustees, I suppose, "have just sold their canal to private parties, it is said, and I "suppose there is no secret in it, in the interest of the railway "companies."

(Q. 6741)

"There was a Parliamentary Notice given last November of a "Bill for the purpose of enabling the Duke of Bridgewater's "Trustees to sell their canal to a number of railway companies, "but the Bill, I believe, has not been introduced; can you give "the Committee any information upon that subject?" "It was "not proceeded with."

(Q. 6742)

"Can you tell the Committee how the matter stands now?" "I can only tell by report, but I believe that there is very good "ground for it. The canal has been sold to private parties, "there is no doubt about that."

(Q. 6743)

"Not to a railway company, I presume?" "They are parties "interested in railways, I have no doubt."

(Q. 6744—Lord Redesdale)

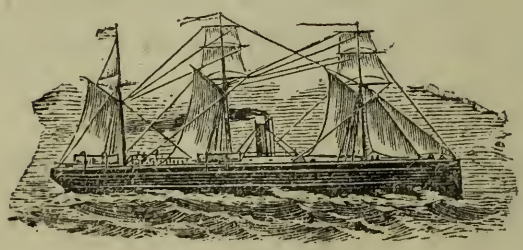
"Under what power has the sale taken place?" "I cannot tell. "No railway company can now lease a canal; not as a company."

(Q. 6745—Chairman)

"Do you mean that the same thing is going to be done "without an Act of Parliament?" "I can only judge by report. "The London and North-Western Company are no parties to it; "that is all I know."

(Q. 6746—Mr. Cross)

"You mean that, although they are private parties, they really "represent a railway company?" "So it is publicly stated."



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